Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

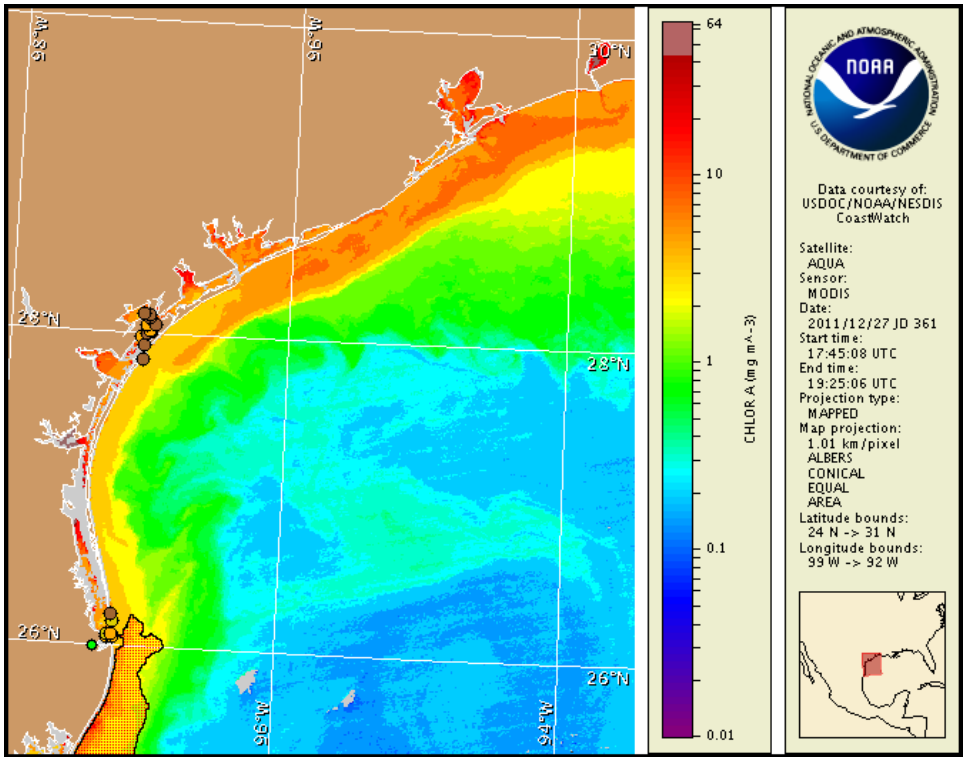
Thursday, 29 December 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Tuesday, December 27, 2011



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from December 19 to 28 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive: http://tidesandcurrents.noaa.gov/hab/bulletins.html

Conditions Report

A harmful algal bloom is present along the Texas coast in the Galveston/Freeport area, within the Matagorda Bay area, in the Port Aransas/Aransas Bay area and within Corpus Christi Bay, alongshore Padre Island National Seashore and the South Padre Island region, and within the lower Laguna Madre. Patchy high impacts are possible today through Saturday in the Port Aransas/Corpus Christi Bay area, and Sunday and Monday alongshore the South Padre Island region and within the lower Laguna Madre. Patchy moderate impacts are possible on Sunday in the Port Aransas/Corpus Christi Bay area, Friday and Saturday alongshore the South Padre Island region, and today through Saturday within the lower Laguna Madre. Patchy low impacts are possible on Monday in the Port Aransas/Corpus Christi Bay area and patchy very low impacts are possible today alongshore the South Padre Island region. Water samples last identified harmful algal blooms in the Galveston Bay area on December 12, in the Matagorda Bay area on December 14, alongshore the Padre Island National Seashore region on November 28, and within the Brownsville Ship Channel on December 2. Associated respiratory impacts remain possible in these areas. No additional impacts are expected at the coast in Texas today through Monday, January 2. Discolored water has been reported from within Matagorda Bay. Dead fish have been reported from the Aransas Bay area. All Texas bays and coastal waters remain closed to commercial and recreational oyster harvesting due to blooms of the harmful algae Karenia brevis (red tide).

Analysis

Due to the upcoming Federal Holiday, the next bulletin will be issued on Tuesday, January 3

A harmful algal bloom continues along much of the Texas coastline.

No new samples have been received from the Galveston or Matagorda Bay regions. The most recent samples identified 'low a' to 'medium' *Karenia brevis* concentrations in the Galveston Bay region, and 'not present' to 'high' concentrations in the Matagorda Bay region (12/5-14; TPWD). Discolored water continues to be reported within Matagorda Bay (12/28; TPWD).

In the Port Aransas region, samples collected from Aransas and Copano bays indicate 'low a' to 'medium' *K. brevis* concentrations (12/27; TPWD). 'Medium' concentrations were identified from sample locations within Fulton Harbor and offshore Key Allegro, in central Aransas Bay (12/28; TPWD). In Copano Bay, samples collected from Lap Reef and Copano Bay Causeway indicate that *K. brevis* concentrations have returned to 'low a' (12/28; TPWD). Samples collected from ARA 6 offshore Fulton, ARA 7 at Long Reef, ARA 11 at ICCW #49, and ARA 13 at Long Reef/St. Jose Island also indicate that *K. brevis* concentrations have returned to 'low a' (12/28; TPWD). Dead fish continue to be reported in the Rockport area, most recently from the end of a canal between Canvasback Lane and Lakeshore Drive (12/28; TPWD).

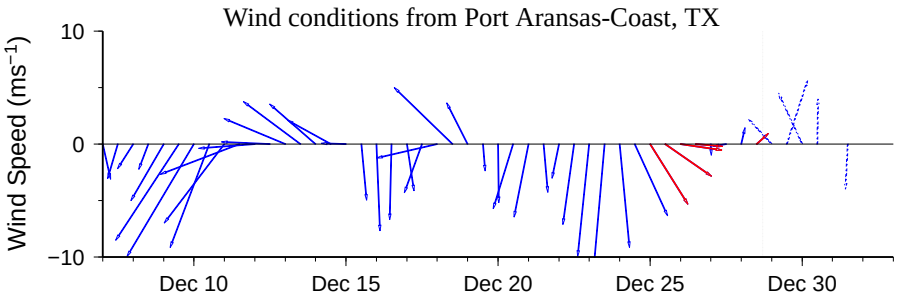
No samples have been received from alongshore Padre Island National Seashore since 'medium' to 'high' *K. brevis* concentrations were identified on 11/28 (TPWD). No new samples have been received from alongshore South Padre Island or within the lower Laguna Madre, where the most recent samples indicated 'very low b' to 'medium' *K.*

brevis concentrations (12/19-22; TPWD). The most recent sample collected within the Brownsville Ship Channel at the San Martin boat ramp indicated that *K. brevis* is not present (12/20; TPWD).

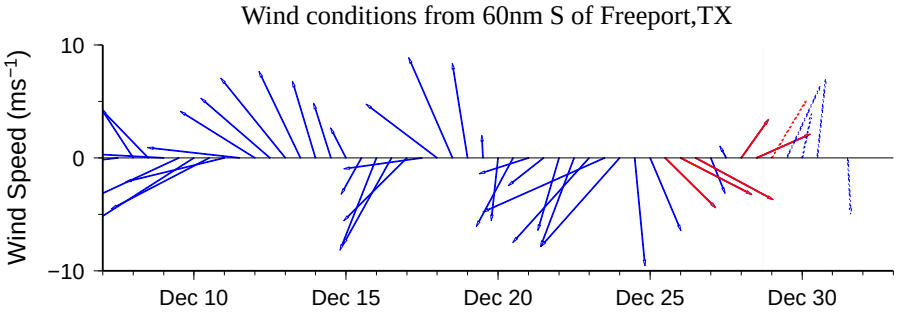
Recent MODIS imagery (12/27; page 1) shows a band of elevated chlorophyll (2 to <10 μg/L) stretching along the entire Texas coastline. Patches of high to very high chlorophyll (10 to >20 μg/L) are also visible in MODIS imagery (12/27; 12/28, not shown) stretching along- and offshore from the Brazos Santiago Pass region to south of the Rio Grande. Elevated chlorophyll at the coast may contain *K. brevis*, but could also be due to the continued resuspension of benthic chlorophyll and sediments, making it difficult to determine the extent of blooms from satellite imagery alone.

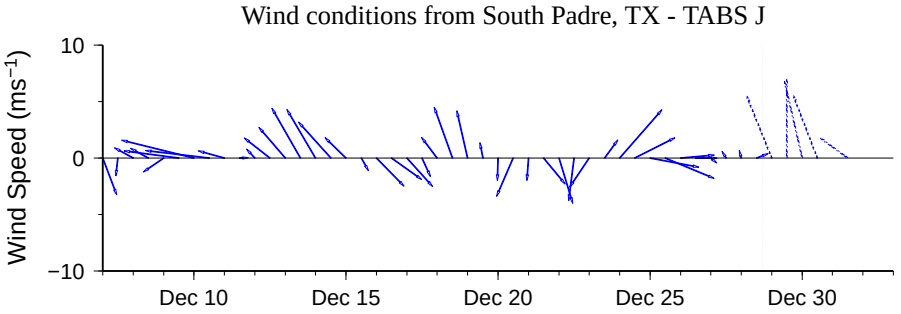
Forecast models based on predicted near-surface currents indicate a maximum bloom transport from coastal sample locations of <10km north (negligible) from the Galveston Bay region, 30km north from the Matagorda Peninsula region, 20km north from Port Aransas, 50km north along the Padre Island National Seashore region, and 60km north from Brazos Santiago Pass from December 27 to January 1. Forecasted onshore winds will increase the potential for impacts along the Texas coast today through Monday.

Kavanaugh, Derner



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).



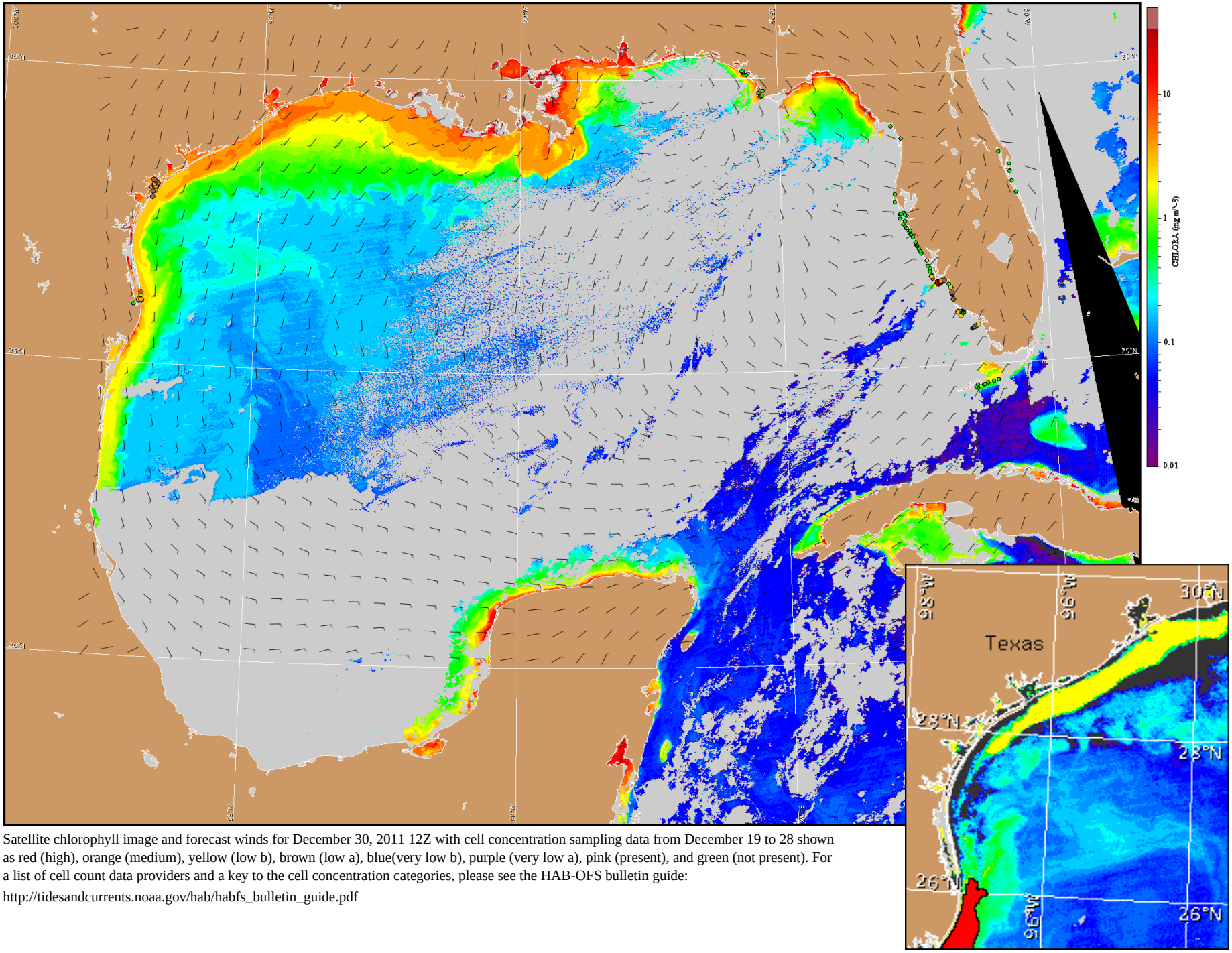


Wind Analysis

Galveston/Freeport: West winds (10-15 kn, 5-8 m/s) today becoming southwest winds (5-10 kn, 3-5 m/s) this afternoon through Friday. South winds (5-10 kn) Friday night through Saturday becoming southeast winds (5-10 kn) Saturday night. Northeast to north winds (5-25 kn, 3-13 m/s) Sunday through Monday.

Port Aransas: Northwest to north winds (5-10kn) today becoming south winds (5-10 kn) tonight through Saturday, shifting southwest after midnight. Northwest winds (5 kn, 3 m/s) Sunday becoming northeast in the afternoon. North winds (15-30 kn, 8-15 m/s) Sunday night through Monday.

South Padre: Northwest winds (10 kn, 5 m/s) today becoming light winds tonight and shifting south (10 kn) Friday. Southeast winds (10-15 kn) Friday night through Saturday. North winds (15-25 kn, 8-13 m/s) Sunday through Monday.



Satellite chlorophyll image and forecast winds for December 30, 2011 12Z with cell concentration sampling data from December 19 to 28 shown as red (high), orange (medium), yellow (low b), brown (low a), blue(very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:
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Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).